



ATTACHMENT A REMARKS

Considering the matters raised in the Office Action in the same order as raised, claims 4 and 13 have been objected to because of certain informalities. Claim 4 has been amended to depend from claim 2 so that there is antecedent basis for the phrase "the concertina sleeve" while claim 13 has been amended to recite "an actuating hand" so that no antecedent is required. The assistance of the Examiner in pointing out these informalities is appreciated.

Claims 1, 5 and 7-13 have been rejected under 35 U.S.C. § 102(b) as being "anticipated by" the Hobbs reference while claims 2-6 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Hobbs and in "further view of Stehlin." Claim 14 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over Hobbs in view of Bachman while claims 15-20 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Hobbs in view of Ytteborg. These rejections are respectfully traversed although claim 1 has been amended to more clearly define over the Hobbs reference.

By way of background, it is noted that the present application acknowledges that rigid piston-cylinder assemblies have been used in breast pumps to generate reduced pressure and that diaphragms made of elastomeric materials have been also used for this purpose (see pages 1 and 2 of the application). The present invention departs from the two prior art approaches in the provision of a flexible sleeve that not only performs the function of sealing the interior of the breast pump from atmosphere but also is movable from a rest position (see Figure 1) to a displaced position (see Figure 3). Thus, embodiments of the invention provide a compact arrangement wherein the flexible sleeve moves between the extended rest position and the compressed displaced position, in contrast with the bulky rigid pistons of the prior art. Further, unlike a rigid piston-cylinder arrangement, the flexible sleeve does not require an additional sealing member or the use of high precision engineering to ensure a fluid tight seal (see page 1, line 22 to page 2, line 3 of the application). In addition, the non-stretch nature of the flexible sleeve avoids the problem associated with diaphragms made from elastomeric material wherein stretching of the diaphragm can cause the user to exert considerable

extra energy to continue pumping the device (see page 2, lines 10-25 of the application).

Claim 1 has been amended to recite that the sleeve of the breast pump is flexible and also recites that the flexible sleeve is moveable between a rest position and a displaced position to generate a reduced pressure within the breast pump. As indicated above, and as claimed in claim 1, the flexible sleeve seals the interior of the pump from atmosphere and has a configuration or is of a material that substantially prevents stretching thereof.

Turning to the Hobbs patent, this patent discloses a breast pump including a rigid piston 7. The rejection identifies elements 6 as a “a sleeve” but element 6 is merely the barrel portion of the piston assembly. It is respectfully submitted that rigid piston 7 is clearly not a sleeve much less a flexible sleeve as now claimed in claim 1.

As indicated above, claims 2-6 have been rejected on a combination of Hobbs and Stehlin. The Examiner contends that it “would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the breast pump of Hobbs with the concertina bellows of Stehlin to construct a fluid tight and inexpensive valve.” It is respectfully submitted that this contention is not well taken. First, it is respectfully submitted that one of ordinary skill in the art would not consult the Stehlin patent in dealing with a problem associated with breast pumps because the patent is concerned with a different technical field and has nothing to do with breast pumps. Moreover, the Stehlin patent is concerned with different technical problems. Further, even if such a hypothetical combination were to be made, the teachings of Stehlin, which relate to a valve, would apply to the valve of the breast pump of Hobbs and not to the piston (i.e., not to the pressure generating part of the device). Thus, it is respectfully submitted that the proposed combination is necessarily the improper product of hindsight.

Considering these points and the Stehlin patent in more detail, the purpose of the “boot” in Stehlin is not a replacement for a sealing disc, but rather is just a cover. Sealing of the valve is achieved in the normal way using a sealing ring (see, e.g., column 1, lines 30-35, column 2, lines 29-32, and Figure 1). The purpose of the boot in Stehlin is to provide protection for the piston arm (68) and the associated valve

operating structure (column 2, lines 18-20 and 24-29). Thus, the purpose of providing a boot in Stehlin is quite different from the purpose of using a concertina sleeve in the present invention as claimed in claim 2 and the claims dependent thereon.

Further, if the boot (36) and sealing ring (44) were incorporated into Hobbs as proposed by the Examiner, the operation of the resulting device would still be equivalent to the piston-type arrangement in Hobbs. The reason for this is that the sealing ring (44) would seal against the inside face of the cylindrical piston body of Hobbs. Thus, there would be no improvement over the existing piston arrangement in Hobbs.

As indicated above, Stehlin is concerned with a valve, and not with generation of variable pressure, and thus the whole point of the device in Stehlin is to move a valve disc (76) with respect to a valve seat (20) to selectively open or close a valve. In Hobbs, the only equivalent element, i.e., a valve, is the plug valve (25). Stated differently, the piston arrangement of the pump body of Hobbs is not a valve, it is the pressure generating means of the breast pump, and, as indicated above, if one of ordinary skill in the art were to take any teaching from Stehlin at all, this teaching would apply only to the plug valve (25) of Hobbs and not to the piston arrangement.

It is also noted that Stehlin is concerned with industrial scale processing of foodstuffs and medicine (see column 1, lines 54-57). In this regard, the valve (10) in Stehlin has an inlet duct (16) and an outlet duct (18) adapted to be connected to vessels or conduits so as to allow fluid to flow through the valve. The inlet and outlet ducts appear to be connected to large scale equipment, e.g., by means of the screw thread and welding (column 2, lines 63 and 64). Thus, again, one of ordinary skill in the art would not look to the teachings of the Stehlin reference in attempting to make improvements in a breast pump.

In addition, not only does the Stehlin patent have nothing whatsoever to do with breast pumps, the operation of the valve in Stehlin would be entirely inappropriate for a breast pump. The movement of valve discs (76) and associated sealing ring (44) is accomplished by rotating a hand wheel (84) and hence, of a valve stem (64), thereby causing axial movement of the threaded sleeve (70) and hence, the valve disc (76) (see column 3, line 61-75). In Figure 2 of Stehlin, a "quick operating" embodiment is shown, but, again, the operation is effected by a handwheel (128) (see column 4, lines 74 to

column 5, line 9). It is respectfully submitted that there is simply no way that this kind of an arrangement would be suitable for use in a breast pump. In this regard, even the disclosures in Stehlin relating to "cylinder actuation" (column 5, lines 9-33) are only concerned with providing simple "off" and "on" operation of the valve and no consideration is given to any pressure change within the valve.

With respect to the other rejections, it is noted that the Bachman and Ytteborg patents clearly do make up the deficiencies of Hobbs and Stehlin as references against parent claim 1, and thus the claims which are rejected based on Bachman and Ytteborg are patentable for at least the reasons set forth above in support of the patentability of claim 1.

It is noted that a new claim 21 has been added, which is similar to claim 1, but recites that the breast pump is a mechanical breast pump.

Finally, it is not clear from the Office Action whether the Examiner has considered the references cited in the International Search Report. These references should have been considered, but in order to make the record clear, a further IDS will be filed shortly which includes the references cited in the International Search Report and other Search Reports.

Allowance of the application in its present form is respectfully solicited.

END REMARKS